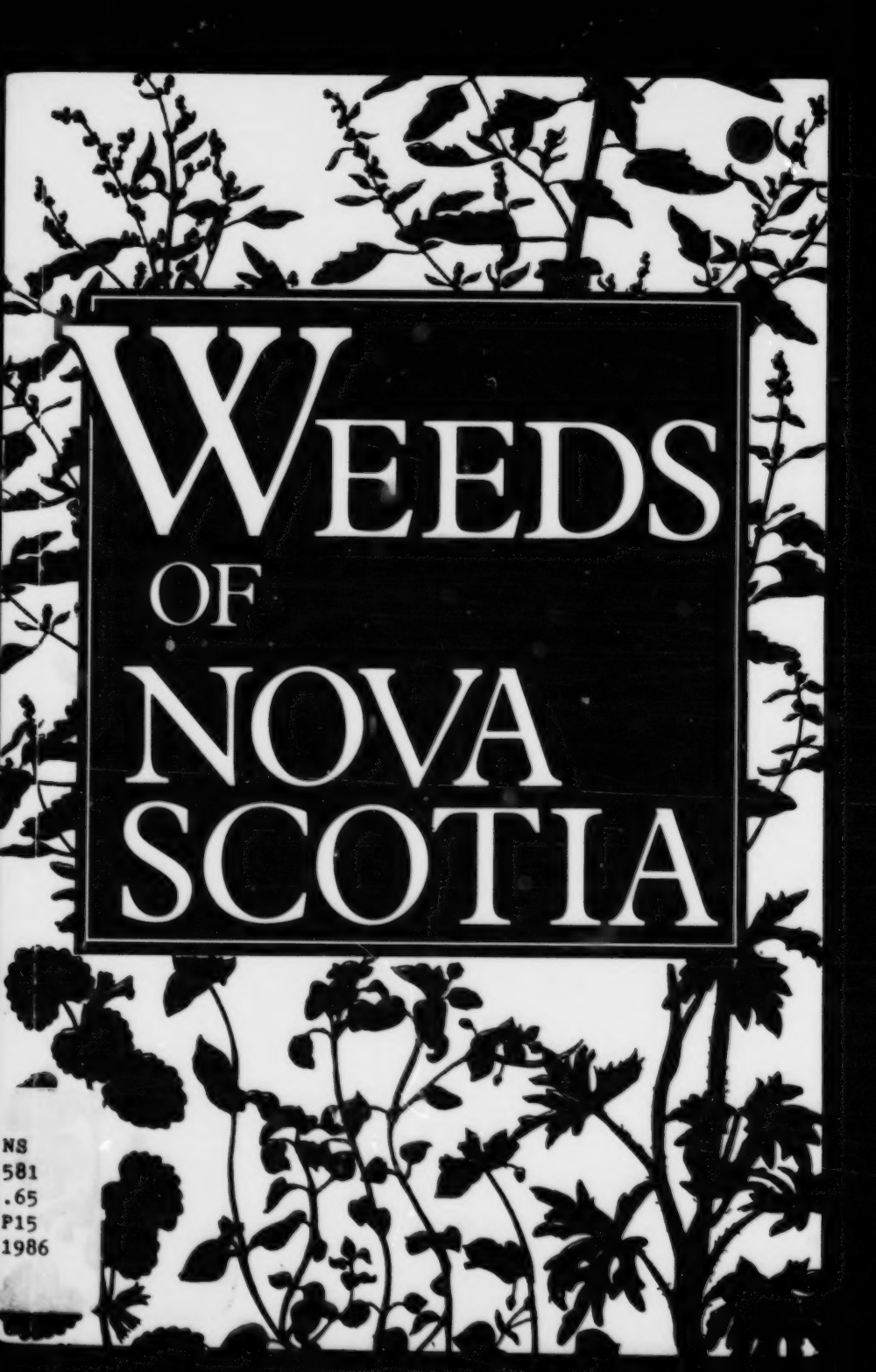

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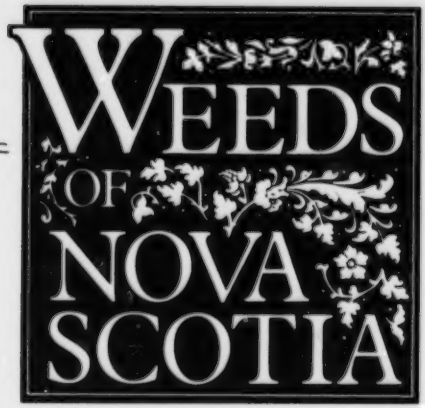

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ANNUAL BLUEGRASS

FAMILY Gramineae (Grass Family).

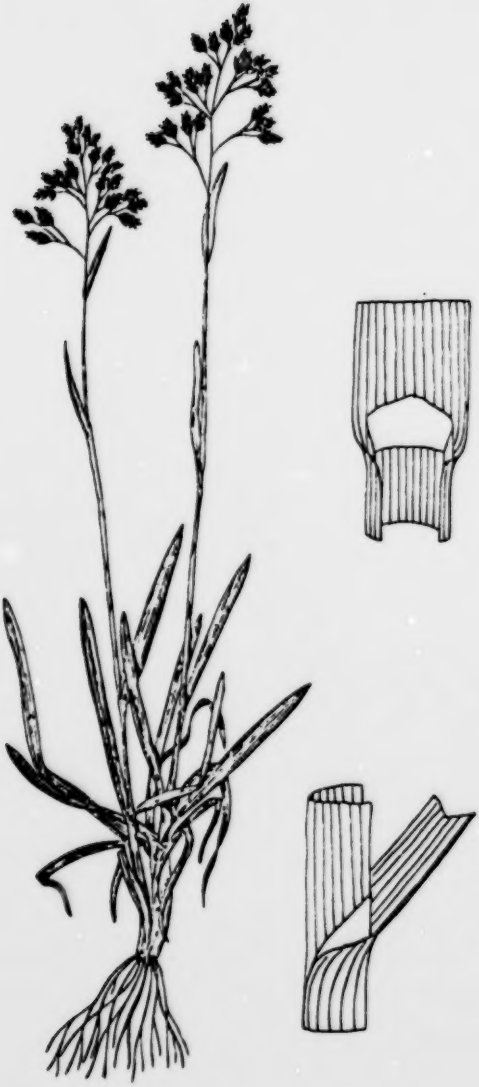
BOTANICAL NAME Poa annua.

DESCRIPTION An annual or winter annual grass reproducing by seeds. Stems are 10 to 20 cm high, tufted, flattened, reclining at the base and frequently rooting at the lower nodes. Leaves are light green, very soft with loose sheaths. Spikelets are 2 to 6 flowered, about 4 mm long in panicles 3 to 10 cm long.

HABITAT Annual Bluegrass is common in gardens, lawns, dooryards, along pasture roads and in areas where heavy trampling keeps down taller growing species. It is being seen more frequently in grain fields and cultivated land.

DISTRIBUTION Common throughout the Province.

CONTROL Annual Bluegrass thrives best during cool weather. In warm weather it turns brown and makes unsightly spots in lawns. Small patches in lawns should be weeded or hoed out early in the spring. Larger areas should be frequently mowed close to prevent seeds forming. Clean cultivation destroys Annual Bluegrass.



Annual Bluegrass, Poa annua.

BARNYARD GRASS

FAMILY Gramineae (Grass Family).

BOTANICAL NAME Echinochloa crusgalli.

DESCRIPTION A vigorous, annual grass, reproducing only by seed. Stems are stout and somewhat succulent, often from 90 to 120 cm high, branching profusely at the base, the branches erect or, in the open, widely spreading or prostrate so that it is difficult to mow. The seeds are rather large, in clustered racemes, covered with scattered, stiff hairs and often with long awns. The grasses may be recognized when young by the fact that they are quick growing grasses with fibrous roots, and the leaves are entirely without a ligule.

HABITAT Barnyard Grass is common in grain and corn fields, cultivated fields, farm yards, waste places and long ditches. It is especially common on moist rich soil and on most farms it will become a problem on rich garden soils which have had applications of manure.

DISTRIBUTION Common throughout the Province.

CONTROL Infested fields should be mowed early where possible to prevent the seeds from maturing. In cultivated fields it should be cultivated and hoed early when the plants are small, since it is very rapid growing and larger plants are difficult to hoe out or to pull because of the extensive root system.

Barnyard Grass, Echinochloa crusgalli: A, plant; B, spikelet; C, spikelet with empty glumes removed, exposing the seed.

COMMON BURDOCK

FAMILY Compositae (Composite or Aster Family).

BOTANICAL NAME Arctium minus.

DESCRIPTION Biennial, reproducing by seeds. Stem is 60 to 180 cm high, erect, grooved, hollow, branched and rough hairy. Tap root is long, thick and fleshy. Leaves are alternate, large, those at the base often 30 cm wide, more or less heart-shaped, wooly hairy on the lower surface, practically smooth above. Flower heads are numerous on short stalks or stalkless, clustered at ends of branches and in axils of leaves, 1.5 to 3 cm across and usually purple in color, occasionally white. Mature flower head forms a prickly bur readily distributed on clothing or animals.

HABITAT Pastures, orchards, strawberry fields, farm yards, around buildings and waste places, usually on fertile soils.

DISTRIBUTION Common throughout the Province.

CONTROL Plough, disk or hoe as soon as seedlings appear. Larger rosettes should be cut deep below soil surface to prevent new crowns from forming from tap roots. Mow flower stalks before seeds are formed.

Common Burdock, Arctium minus: A, plant; B, rosette; C, seeds

BUTTERCUPS

FAMILY Ranunculacae (Buttercup Family).

BOTANICAL NAMES Ranunculus acris (Tall Buttercup); Ranunculus repens (Creeping Buttercup).

DESCRIPTION Both plants are perennials reproducing by seed and by runners. The plants are so well known that no description should be needed. However, two kinds should be recognized. The Tall Buttercup has leaves deeply lobed with the lobes again divided into three parts and without stalks. This is the tall plant without runners. The Creeping Buttercup is often prostrate and rooting at the nodes, with the leaves divided into three stalked, lobed leaflets. Both kinds flower from mid-June to the end of July, or later.

HABITAT Damp fields, strawberry fields, meadows, ditches and generally in low ground. As the daisy and hawkweeds are the common weeds of the upland fields, so the Buttercups are the common weeds of the more poorly drained ones. The Tall Buttercup is more common in wet fields and meadows; the Creeping Buttercup often forms mats where standing water exists or remains longer in the spring.

DISTRIBUTION Both types are common throughout the Province.

CONTROL Since Buttercups thrive best in moist soil, any improvement in drainage will help in control. They do not persist under cultivation, so badly infested meadows should be plowed and put under clean cultivation for a year if possible. Fertilize and harrow pastures in the spring. Mow the clumps of Buttercups when the first flowers appear and again later when the second crop is produced.

Tall Buttercup, Ranunculus acris: A, plant; B, seed.
Creeping Buttercup, Ranunculus repens: C, leaf.

CANADA THISTLE

FAMILY Compositae (Composite or Aster Family).

BOTANICAL NAME Cirsium arvense.

DESCRIPTION Perennial, reproducing by seeds and creeping roots. The stems are from 30 to 120 cm high with leaves that are very irregularly lobed and spiny-toothed on the margins. The flowers are rose-purple and are formed from early July throughout the growing season. Often seeds are not formed, and a whole field may be contaminated with plants of a single clone. The Bull Thistles do not have creeping roots and their flowers and spines are much larger.

HABITAT Canada Thistle can be found in most well-drained soils in grain fields, cultivated areas, pastures, meadows and waste places. Patches are common along most of our roadsides.

DISTRIBUTION One of our most common weeds throughout the Province.

CONTROL Small patches should be destroyed promptly by digging out the roots. Persistent cutting will gradually destroy the thistle but it is very difficult to be persistent enough. The first cutting should be made just before the plants blossom and additional cutting should be made as soon as new shoots appear. Clean cultivation serves the same purpose.

A short rotation of one year grain crop, one year clover, and two years cultivated crops will permit sufficient cultivation to control Canada Thistle under most conditions. Allow no thistles to produce seeds. Avoid scattering the roots from small patches of thistles to clean parts of the field during cultivation.

Bull Thistle, Cirsium vulgare.

Canada Thistle, Cirsium arvense: A, plant; B, seed with pappus; C, seed with pappus removed.

CHAMOMILE AND MAYWEED

FAMILY Compositae (Composite or Aster Family).

BOTANICAL NAMES Matricaria maritima (Scentless Chamomile); Anthemis cotula (Stinking Mayweed).

DESCRIPTION These two weeds are very similar in appearance. Scentless Chamomile can be either annual or a short-lived perennial. Stems are usually erect, hairless, 15 to 100 cm high and much branched. Leaves are alternate, soft and finely dissected into narrow segments. Stinking Mayweed may occur as annuals or winter annuals. Stems and leaves are similar to Scentless Chamomile, except stems are 10 to 60 cm high and finely hairy just below flower heads. Flower heads of both are similar with a yellow disk surrounded by white rays similar to a daisy. All parts of Stinking Mayweed, when crushed, have an offensive disagreeable odor, while the Scentless Chamomile plant is virtually odorless.

HABITAT Grain fields, cultivated land, gardens, farm yards, roadsides and waste places.

DISTRIBUTION Scentless Chamomile is common along the Northumberland Strait, and along the French Shore of Digby and Yarmouth Counties; scattered elsewhere, occasionally becoming weedy in dykelands and cultivated fields near the coast. Stinking Mayweed is scattered to common throughout, usually where soils are compacted and competition is light.

CONTROL Clean cultivation of row crops followed by hand weeding or hoeing. Harrow grain fields while the seedlings are small. Mow in other areas before seeds are formed.

Scentless Chamomile, Matricaria maritima var. agrestis: A, plant; B, seed.
Stinking Mayweed, Anthemis cotula: C, seed.

CHICKWEEDS

FAMILY Caryophyllaceae (Chickweed or Pink Family).

BOTANICAL NAMES Cerastium vulgatum (Mouse-ear Chickweed); Stellaria media (Common Chickweed); Stellaria graminea (Stitchwort); and Saginia procumbens (Pearlwort).

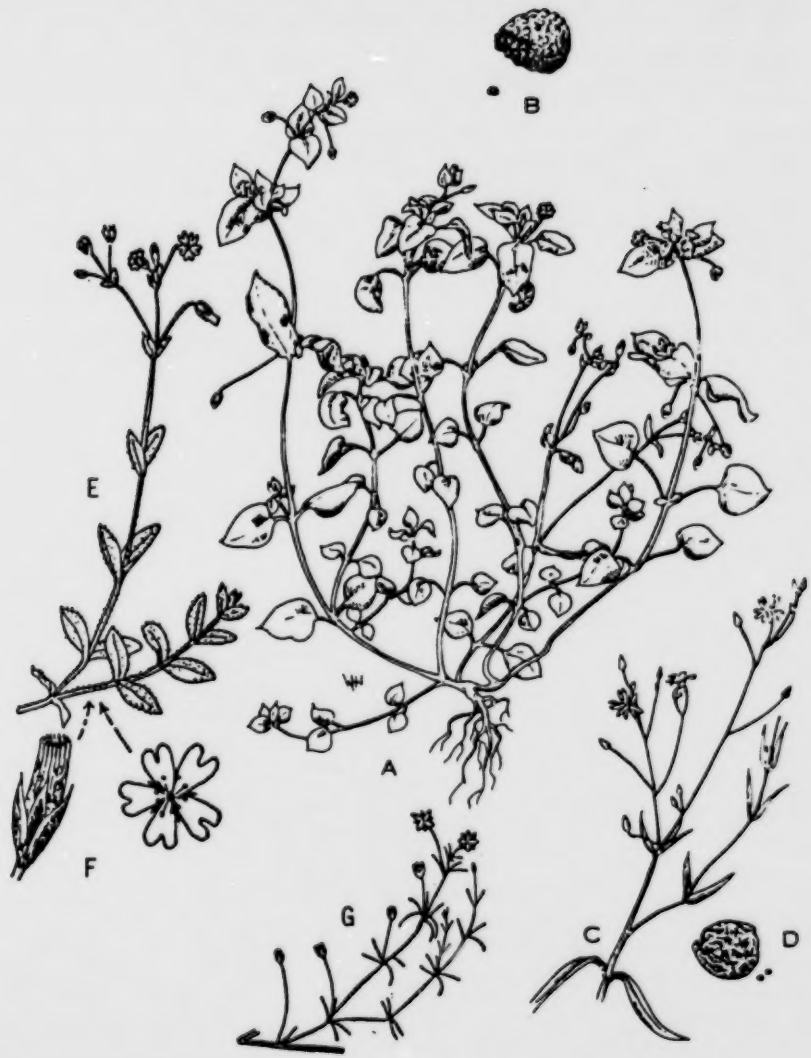
DESCRIPTION All these chickweed-like plants may be annuals, winter annuals or perennials and have small, white flowers with four or five petals all of equal size. The stems are creeping or weakly ascending and they may flower throughout the growing season.

Mouse-ear Chickweed has hairy stems and leaves, with the capsule open at the end. Common Chickweed has thin, roundish leaves, very small flowers, and a pod that splits open. Stitchwort is an open, branched form with rather showy flowers and narrow, smooth, grass-like leaves. Pearlwort is low and moss-like with the leaves fine and narrow.

HABITAT Mouse-ear Chickweed is found mostly in lawns or pastures; Common Chickweed is found in pastures and shady locations on richer soil, especially if it is manured; Stitchwort is widespread in lawns, strawberry fields, pastures, grain fields, hayfields and cultivated land. Pearlwort is mostly found in shaded or damp rich soil, such as lawns and golf greens.

DISTRIBUTION All forms are found throughout the Province in the proper habitats.

CONTROL Mouse-eared Chickweed and Stitchwort do not persist under cultivation; in lawns raise the creeping stems with a rake and mow close to the ground. Small patches can be dug or hoed out or reseeded or planted with new sod. The Common Chickweed is more difficult but can be controlled by similar methods.



Common Chickweed, Stellaria media: A, plant; B, seed.
Stitchwort, Stellaria graminea: C, plant; D, seed.
Mouse-ear Chickweed, Cerastium vulgatum: E, plant;
F, flower and capsule. Pearlwort, Sagina procumbens: G, part of the plant.

CORN SPURRY

FAMILY Caryophyllaceae (Chickweed or Pink Family).

BOTANICAL NAME Spergula arvenis; commonly known also as Pine Weed and Thousand-joint.

DESCRIPTION An annual, reproducing only by seed. The stems branch from the base and grow to a height of 12 to 25 cm. The leaves are bright green and needle-like in appearance. These are in whorls at the nodes of the stem so that the plant when small resembles a tiny pine tree. The small white flowers are borne continually once the plant is large enough to flower. A large number of seeds are produced during the summer and fall.

HABITAT Spurry is a common weed of fields, cultivated areas and gardens. Perhaps the most characteristic habitat is in grain fields where it often forms a mat over the ground. It is also often troublesome when row crops are seeded on moist land.

DISTRIBUTION One of the most common throughout the Province.

CONTROL Practice after-harvest cultivation to induce the seeds to germinate. In row crops use clean cultivation followed by hand hoeing and pulling.

Corn Spurry, Spergula arvenis: A, plant; B, seeds.

CRAB GRASS

FAMILY Gramineae (Grass Family).

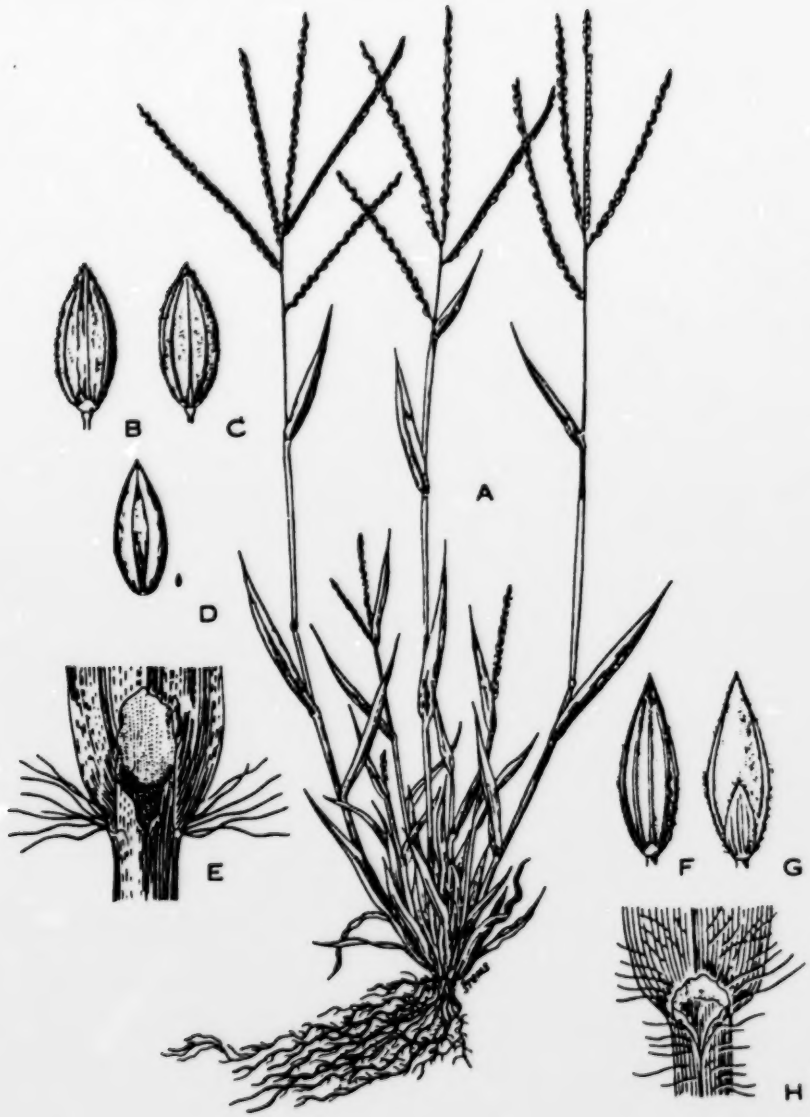
BOTANICAL NAMES Digitaria ischaemum (Smooth Crab Grass or Small Crab Grass);Digitaria sanguinalis (Large Crab Grass).

DESCRIPTION Crab Grasses are annuals reproducing by seeds and by stems rooting at lower nodes. Smooth or Small Crab Grass has stems 10 to 40 cm long, without hairs, much branched, spreading or forming flat mats, sometimes rooting at lower nodes; leaves alternate, 2 to 12 cm long and 3 to 6 mm wide with sheath and blade hairless; spikelets on short stems in two rows on one side of a spike-like raceme; spreading from the top of the stem to 3 to 5 racemes. Large Crab Grass has erect stems ascending 20 to 100 cm from a reclining base. Leaf blades are hairy, 5 to 12 cm long and 4 to 10 mm wide. Sheaths and nodes are somewhat hairy. There may be 3 to 10 racemes spreading from near the top of the stem.

HABITAT Crab Grass is found in lawns, cultivated fields, gardens, roadsides, ditches and waste places, especially on light soils. This grass has become a problem in corn fields.

DISTRIBUTION Scattered and locally common on sandy soils, especially in the Annapolis Valley. Smooth Crab Grass is far more common than Large Crab Grass.

CONTROL Practice clean cultivation followed by hoeing or hand weeding of late appearing plants in cultivated fields or gardens. In lawns, hand weed early. If plants in a lawn are large, raise with a rake and mow close to prevent seed production. Late fall or early spring fertilizer stimulates other lawn grasses before this weed germinates.



Smooth Crab Grass, Digitaria ischaemum: A, plant; B, front of spikelet with minute first glume at base; C, back of spikelet entirely covered by second glume; D, seed; E, junction of leaf blade and sheath. Large Crab Grass, Digitaria sanguinalis: F, front of spikelet with first glume at base; G, back of spikelet about half covered by second glume; H, junction of leaf blade and sheath.

DAISY FLEABANE

FAMILY Compositae (Composite or Aster Family).

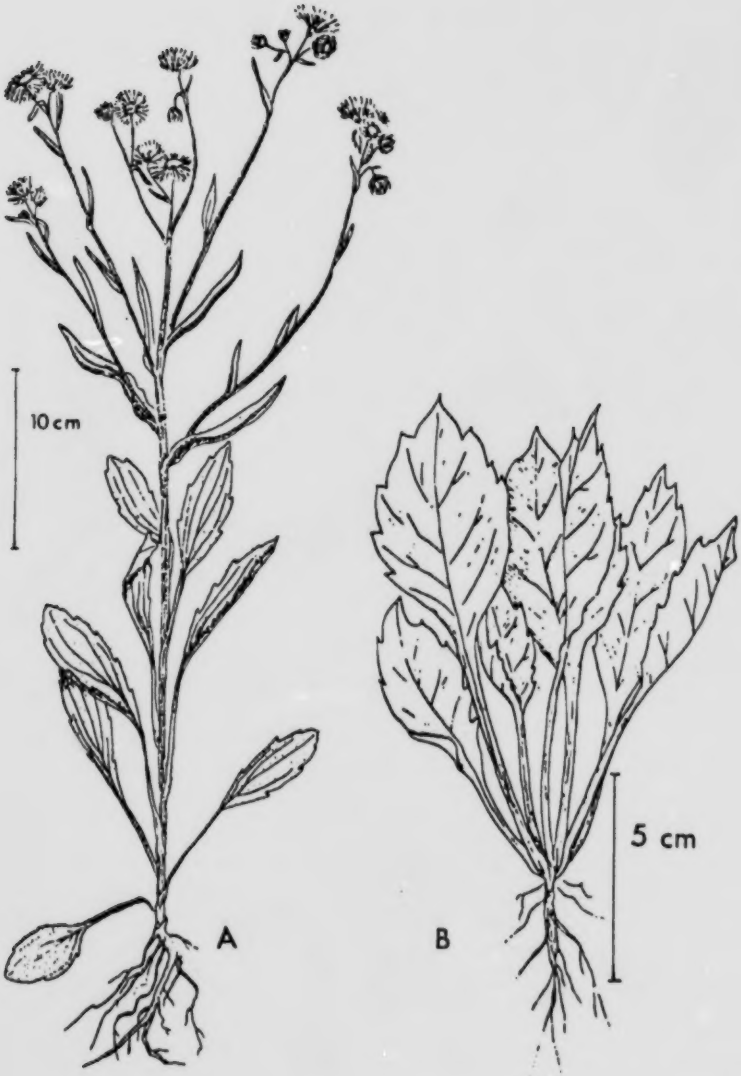
BOTANICAL NAMES Erigeron annuus and Erigeron ramosus.

DESCRIPTION Annual or biennial plants reproducing by seeds. The stems are erect, branched above and 30 to 150 cm high; leaves are narrow to oval, with the edge smooth or coarsely toothed. The white flowers are daisy-like in appearance, but are much smaller, very numerous, and with many narrow rays. Flowering occurs from July through September.

HABITAT Meadows, pastures, run-out fields, roadsides and waste places. This is a very common weed in mid-summer in hay fields, and particularly in fields several years in grass.

DISTRIBUTION Common throughout the Province.

CONTROL The habitat and growth of the Daisy Fleabanes are similar to that of the Daisy in many respects but the weeds are larger and flower later in the summer. Close grazing will destroy the rosettes in pastures and meadows. New hay fields infested with Fleabane should be cut as soon as the flower stalks of the weeds appear. In general, earlier cutting of the hay should reduce the amount of this weed showing up in fields. Old fields badly infested should be plowed and cultivated and then sown with grain or a cultivated crop.



Daisy Fleabane, Erigeron annuus: A, flowering plant;
B, rosette of basal leaves.

DANDELIONS

FAMILY Compositae (Composite or Aster Family).

BOTANICAL NAMES Taraxacum officinale (Common Dandelion); Leontodon autumnalis (Fall Dandelion or August Flower).

DESCRIPTION Perennials, reproducing by seeds and short shoots from the tap roots. The long basal leaves are deeply and pinnately lobed, and the flowers are yellow.

The Common Dandelion has a large rosette of leaves and the flowers are borne singly at the top of the hollow stems. It flowers primarily in late May although occasional flowers will be found later in the season.

The Fall Dandelion has a more wiry, branching stem with several flowers borne singly at the ends of the branches. This plant flowers mostly later in the season, as its two common names indicate.

HABITAT Both Dandelions are found in meadows, lawns, pastures, roadsides and waste places. The Common Dandelion grows more luxuriantly in good or moist soils; the Fall Dandelion is also widespread and is more tolerant of drier conditions.

DISTRIBUTION Both are common throughout the Province.

CONTROL If fields are infested, mow before the Dandelions go to seed, and after the crop is harvested, plough deeply and sow to a hoed crop the following year.

Scattered plants of Dandelions in lawns can be removed by digging them out.

Fall Dandelion, Leontodon autumnalis: A, plant; B, head of flowers; C, mature head; D, seed and pappus. Common Dandelion, Taraxacum officinale: E, plant; F, seed showing beak and pappus and enlarged seed without beak or pappus.

DOCKS

FAMILY Polygonaceae (Buckwheat Family).

BOTANICAL NAMES Rumex crispus (Curled Dock); Rumex acetosa (Sour Dock).

DESCRIPTION Curled Dock is a tall perennial up to 90 cm high, reproducing by seed. The plant during the first year or in the fall forms a dense rosette of large, lanceolate, prominently curly and wavy leaves. The stems are smooth, enlarged at the nodes and with a sheath above each one. The three sepals of the flower are much enlarged and toothed to form a covering over the small, triangular seed. Similar docks have broad leaves, almost like a wild rhubarb.

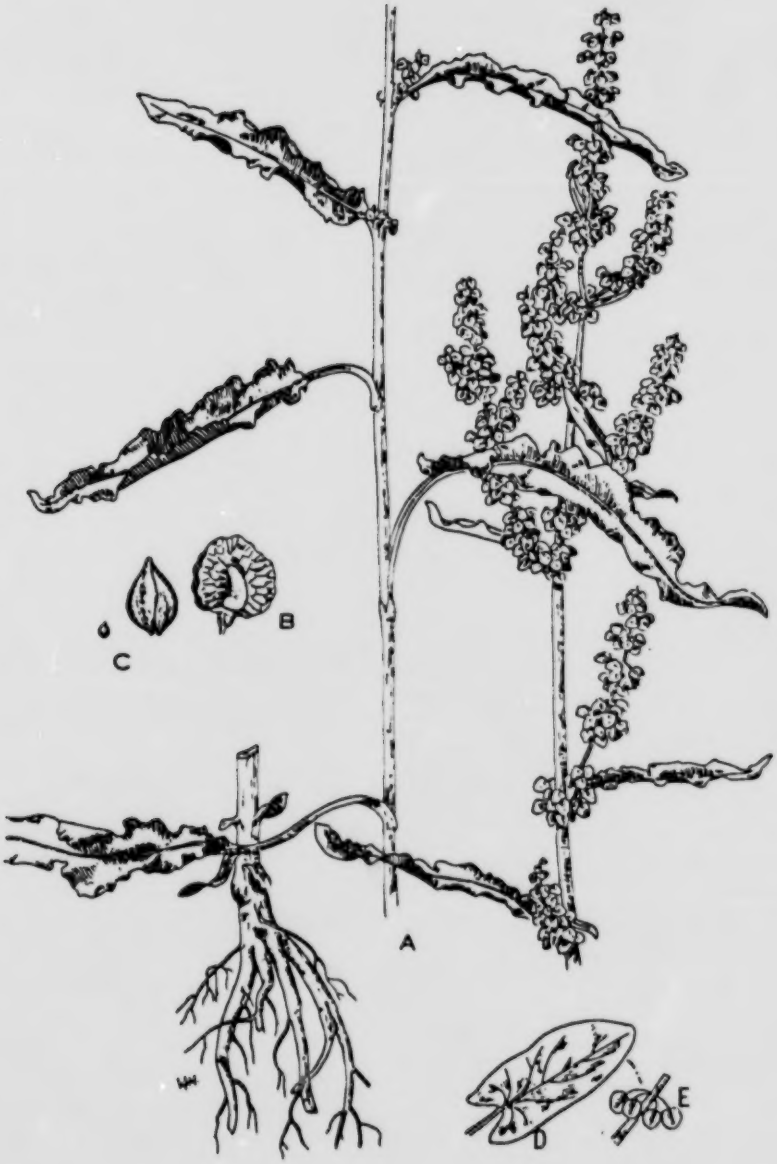
Sour Dock is also a perennial, reproducing by seeds and creeping root systems. The plant flowers rather early, is reddish in color, and has arrow-shaped leaves, so that it is somewhat like an over-sized Sheep Sorrel.

HABITAT Curled Dock is found in meadows, pastures, orchards, strawberry fields and waste places.

Sour Dock is common in pastures and waste places, as well as in permanent meadows and fields on good or alluvial soils.

DISTRIBUTION Curled Dock is common throughout the Province. Sour Dock is naturalized and local but abundant in the areas in which it is found: fields and meadows around Windsor, Yarmouth, Truro and in many other places in the Annapolis Valley and along the South Shore.

CONTROL Remove scattered plants, including all the roots. If fields are over-run, plow and follow by clean cultivation. Sour Dock seems to be more aggressive and a crop rotation can be practiced on old fields and meadows.



Curled Dock, Rumex crispus: A, plant, B, sepal (valve) with tubercle; C, seed. Sour Dock, Rumex acetosa: D, leaf; E, seed.

EVENING-PRIMROSE

FAMILY Onagraceae (Evening-Primrose Family).

BOTANICAL NAME Oenothera biennis.

DESCRIPTION Biennial, reproducing by seeds. Stems are erect, simple, stout, hairy, growing 60 to 180 cm high from a winter rosette of lanceolate leaves on a fleshy tap root. Leaves are alternate, simple, without stalks, toothed, lanceolate, tapering to a long point with velvety hairs. Flowers in a terminal spike without stems, have 4 yellow petals 1.5 to 2.5 cm long. Fruit is a 4 celled, 4 angled capsule, 2 to 3 cm long with many seeds.

HABITAT Dry, gravelly or sandy neglected fields, meadows, pastures, waste places and roadsides; occasionally in strawberry fields.

DISTRIBUTION Scattered to common throughout the Province.

CONTROL Hoe or spud weeds while still in the rosette stage. Mow tops before seeds are produced.

Yellow Evening-Primrose, Oenothera biennis: A, plant; B, seeds.

FOXTAIL GRASSES

FAMILY Gramineae (Grass Family).

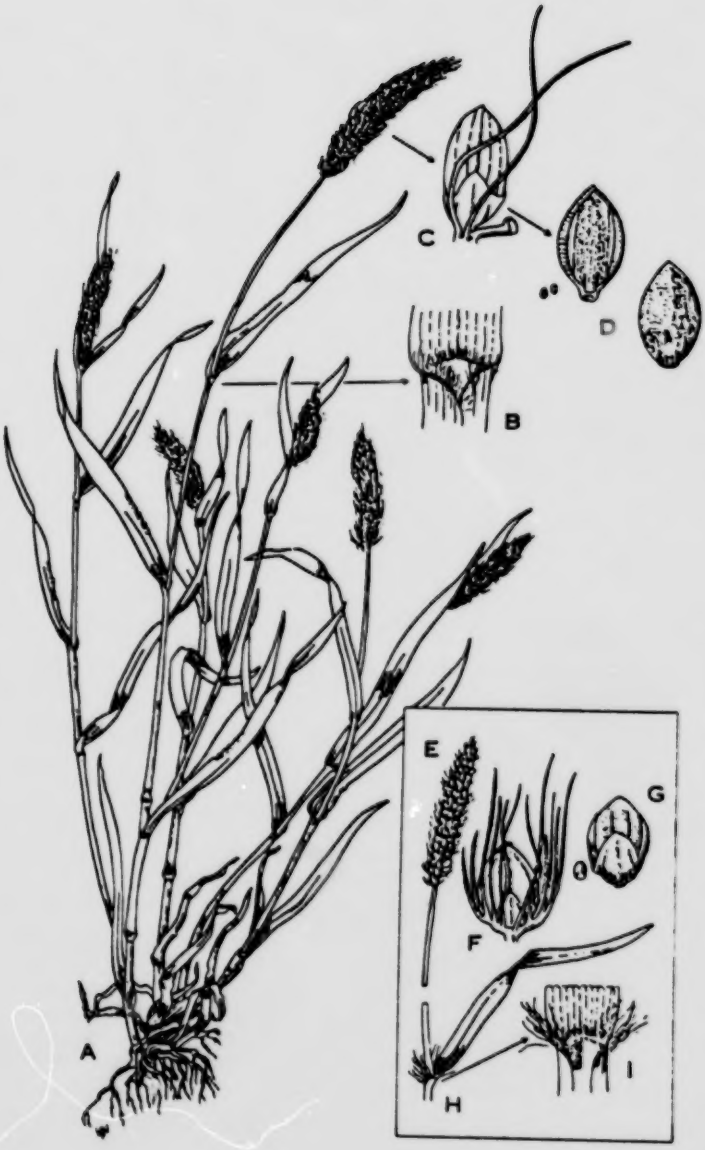
BOTANICAL NAMES Setaria viridis (Green Foxtail); Setaria glauca (Yellow Foxtail).

DESCRIPTION Both grasses are annuals reproducing by seeds. Green Foxtail has stems erect or spreading, 10 to 100 cm tall, usually round but occasionally much flattened. Leaves and leaf sheaths of very young plants are often densely hairy but upper leaves and sheaths are mostly hairless. Surface and margin of leaves are rough with fine barbs. Ligule and edge of split sheath are a fringe of hair. Flowers, on a dense spike 1 to 10 cm long, arecovered with short green to slightly purplish bristles. Seeds are yellowish green. Yellow Foxtail is similar but is distinguished by a few prominent kinky hairs on upper surface of the leaf, near the stem; edges of split sheath are smooth; bristles on spike are yellow or orange; seeds are larger and are yellowish or straw colored.

HABITAT Cultivated lands, gardens, grain stubble, orchards, roadsides and waste places.

DISTRIBUTION Green Foxtail is common in the Annapolis Valley and scattered throughout the remainder of the Province. Yellow Foxtail is less widely distributed, being common in the Annapolis Valley and rarer throughout the rest of the Province.

CONTROL Clean cultivation until late season to prevent seed formation. Scattered plants should be pulled before seeds mature. Sheep grazing on stubble fields can prevent a new crop of seeds.



Green Foxtail, Setaria viridis: A, plant; B, junction of leaf blade and sheath showing ligule; C, spikelet; D, seed. Yellow Foxtail, Setaria glauca: E, head; F, spikelet; G, seed; H, leaf blade showing long hairs at base; I, junction of leaf blade and sheath.

GOLDENRODS

FAMILY Compositae (Composite or Aster Family).

BOTANICAL NAMES The most common Goldenrods are Solidago canadensis (Canada Goldenrod); Solidago graminifolia (Narrow-leaved Goldenrod or Yellow Weed).

DESCRIPTION Both plants are perennials reproducing by seeds and rootstocks. The flowers are yellow and occur from early July through August.

Canada Goldenrod has simple erect stems which grow 60 to 150 cm high. The flower heads are small, numerous and crowded along one side of the flowering branches. Other species may also be common and are often much smaller.

The Narrow-leaved Goldenrod is mostly 30 to 75 cm high and has the flowers in terminal flat-toped clusters. The flowers of this type do not have any rays and are therefore less showy.

HABITAT Canada Goldenrod is found in blueberry fields, meadows, old fields, fence rows, waste places and roadsides. This is usually the Goldenrod found taking over old fields. The Narrow-leaved Goldenrod is also common, but it is more often found in heavy soils or in damp, poorly drained areas in fields and thickets.

DISTRIBUTION Both are common throughout, with the exception that Canada Goldenrod is rare in the southwestern counties of Nova Scotia.

CONTROL Plow infested fields shallowly in the autumn and plant a cultivated crop the following year. If the field is seeded down immediately, care must be taken that the cultivation is sufficient to eradicate any living crowns.

Canada Goldenrod, Solidago canadensis: A, plant; B, seed with pappus. Narrow-leaved Goldenrod, Solidago graminifolia: C, plant.

GROUND IVY

FAMILY Labiatae (Mint Family).

BOTANICAL NAME Glechoma hederacea.

DESCRIPTION This weed reproduces by creeping tangled rootstocks and by seed. The stems are creeping or trailing with numerous erect, flowering branches which are smooth and squarish in cross-section. The leaves are long-stalked, borne opposite on the stem, and are nearly round with the margins of the blade toothed. The flowers are borne in the axils of the leaves. They are rather small, two-lipped, and are purplish in color. This is one of our earliest plants to flower; flowers appear mainly in early May although scattered ones are formed through August.

HABITAT Ground Ivy grows in waste ground and along roadsides near dwellings from whence it has spread to gardens, lawns and shady areas. Because of its rapid growth in early spring, it often becomes established and flourishes in shady areas. It is commonly found around buildings where it forms large patches.

DISTRIBUTION Common throughout the Province.

CONTROL Fields that are infested should be plowed and planted to hoed crops. In lawns, mow as close as possible as soon as it commences growth in the spring. Raking may lift up the runners and enable closer cutting.

Ground Ivy, Glechoma hederacea: A, plant; B, flower; C, seed.

GROUNDSEL

FAMILY Compositae (Composite or Aster Family).

BOTANICAL NAMES Senecio vulgaris (Common Groundsel); Senecio viscosus (Sticky Groundsel or Clammy Groundsel).

DESCRIPTION Annual or winter annual reproducing by seeds. Stems are erect, much branched, Common Groundsel without hairs, Clammy Groundsel with dense soft hairs, 10 to 50 cm high. Leaves are alternate, lobed, lobes irregularly toothed. Flower heads are stalked in clusters at the end of stems and branches, about 1 cm in diameter, yellow in color with no rays. Seeds have a soft hairy white pappus to aid in wind dispersal. Clammy Groundsel is easily distinguished from Common Groundsel by the sticky or clammy feel of the plant.

HABITAT Gardens, nurseries, cultivated fields, waste places and roadsides, usually in rich soil.

DISTRIBUTION Common Groundsel is common in towns, gradually spreading into the country, also about many fishing villages and the surrounding cliffs and beaches. Clammy Groundsel is common about towns, especially railroads and rapidly spreading.

CONTROL Since the weed is most troublesome during cool wet weather in autumn and spring, harrow several times in the autumn to destroy seedlings and promote germination. Plough early the next spring before planting crops.

Common Groundsel, Senecio vulgaris.

HAWKWEEDS

FAMILY Compositae (Composite or Aster Family).

BOTANICAL NAMES Hieracium pilosella (Mouse-ear Hawkweed); Hieracium floribundum (King Devil).

DESCRIPTION Perennials reproducing by seed and leafy runners. These are common plants with smaller dandelion-like yellow heads of flowers and similar heads of winged seeds. The leaves, however, are bristly or hairy and are neither lobed nor toothed.

The Mouse-ear Hawkweed is around 15 cm high and has one solitary golden-yellow flower on each stem. It spreads freely by runners and often forms a carpet in old grasslands.

The King Devil exists in several forms. It grows 30 to 90 cm high, and several flowers are borne in an open cluster on each stem. Runners may or may not be present. This is more often the form in hay fields. Both types flower from late June through early August.

HABITAT The Hawkweeds appear in lawns, pastures, orchards, blueberry fields, bare slopes and run-out fields and waste places. Their abundance is correlated with light or poor soils, poor fertility and over-grazing.

DISTRIBUTION Common throughout the Province; especially on slopes; not so common near the sea, or in damp areas.

CONTROL Infested fields should be mowed before seeds are produced. Crop as early as possible and cultivate till freeze-up. Sow hoed crop the following year. Control consists essentially in shorter rotations and in raising the fertility so that the Hawkweeds have more competition from the forage grasses and legumes.

Mouse-ear Hawkweed, Hieracium pilosella: A, plant. King Devil Hawkweed, Hieracium floribundum: B, plant.

HEAL-ALL OR SELF-HEAL

FAMILY Labiatae (Mint Family).

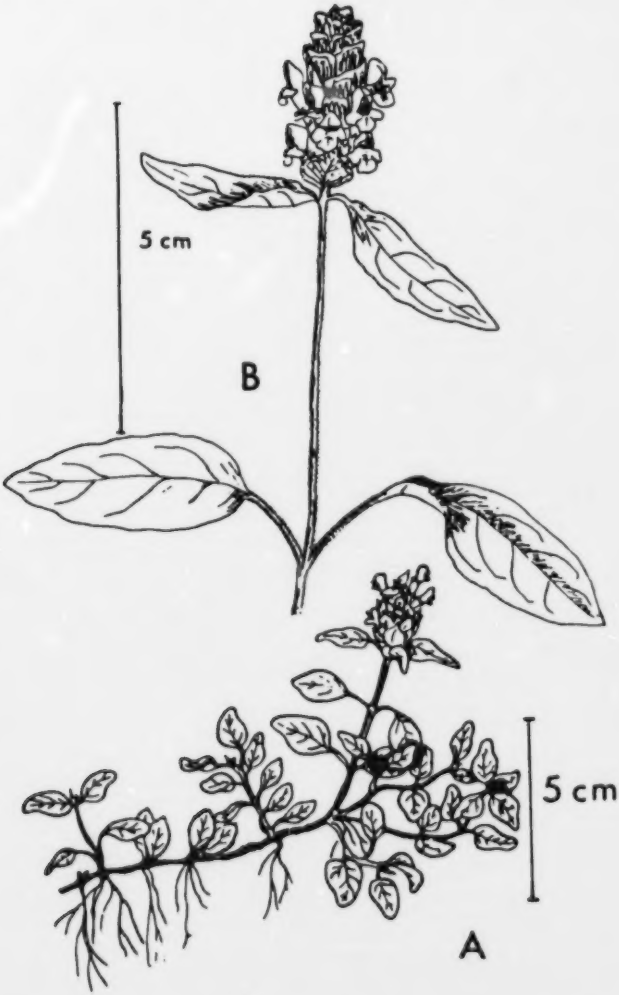
BOTANICAL NAME Prunella vulgaris (Heal-all).

DESCRIPTION Perennial, reproducing by seeds and short creeping stems. The stems are squarish and erect, solitary or with a few branches, often spreading and low among the grass or rising up to 30 cm in height. In lawns or closely-grazed pastures they are often prostrate and frequently root at the nodes. The leaves are opposite, oblong, usually with a smooth edge. Flowers in a close, thick oblong spike are purplish in color. The plant blooms from June through September.

HABITAT Heal-all is usually found in shady places and thickets in rich soil; and occasionally becomes a weed in fields, gardens, pastures, meadows, lawns and waste places.

DISTRIBUTION Common throughout the Province.

CONTROL Plow badly infested meadows and pastures and plant a clean cultivated crop a year before seeding. In pastures where plowing is impractical, the addition of fertilizer and early spring harrowing, followed by reseeding with grass and white clover, will stimulate the sod to crowd out this weed.



Heal-all, Prunella vulgaris: A, plant with prostrate habit; B, top of flowering stem.

HEMP NETTLE

FAMILY Labiatae (Mint Family).

BOTANICAL NAME Galeopsis tetrahit (Hemp Nettle).

DESCRIPTION An annual reproducing by seed. The stems are erect or spreading, much branched, and grow to a height of 30 to 75 cm. The stems and leaves have stiff bristly hairs and the flower parts are tipped with awns so that the plant is nettle-like. The flowers are rather small, tubular and two-lipped, pinkish to purple in color and are borne in dense clusters in the axils of the upper leaves. Flowers are borne from July through September and four nutlets are formed in each one.

HABITAT Hemp Nettle is found in grain fields, cultivated fields, and waste places, and it is often a bad weed in gardens.

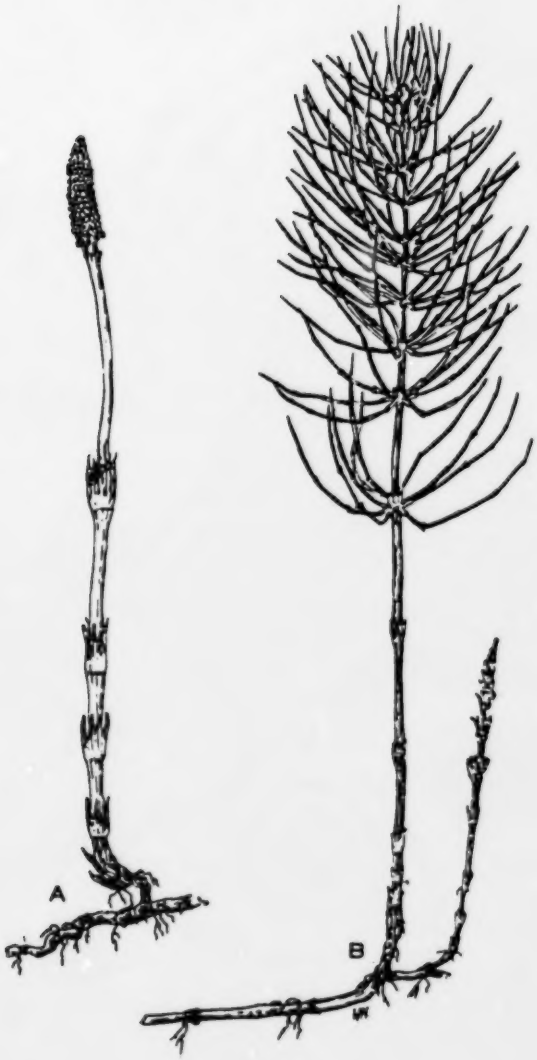
DISTRIBUTION Very common throughout the Province.

CONTROL Clean cultivation, especially when the plant is in the seedling stage.

Hemp Nettle, Galeopsis tetrahit: A, plant; B, flower; C, mature flower with 4 seeds; D, seed; E, seedling.

HORSETAIL

FAMILY	Equisetaceae (Horsetail Family).
BOTANICAL NAME	Equisetum arvense (Field Horsetail).
DESCRIPTION	Horsetail is a perennial reproducing by spores and creeping tuber-bearing rootstocks. The stems are annual, hollow, jointed, of two kinds. The fertile stems are erect, 15 to 30 cm high, without green color and terminated by the cone that bears the spores. The sterile stems arise later and are green, erect or prostrate, up to 40 cm high, and the branches are in whorls. The leaves are small and scale-like, and the terminal branches are often three-sided. The fertile shoots appear in early May and the sterile shoots appear soon after and grow until late autumn. Horsetail is poisonous and horses and cattle fed on hay containing large quantities of this weed are severely affected.
HABITAT	Horsetail is found in low areas, wet fields, along roadside embankments and railroads, and is often a bad weed in poorly drained areas.
DISTRIBUTION	Common throughout the Province.
CONTROL	The deep-seated system of roots and rootstocks make horsetail very difficult to eradicate. Improved drainage, clean cultivation, and the application of fertilizer to stimulate the crop plants will gradually drive out horsetail.



Field Horsetail, Equisetum arvense: A, stem with spore-bearing cone; B, stem with branches.

KNOTWEEDS

FAMILY Polygonaceae (Buckwheat Family).

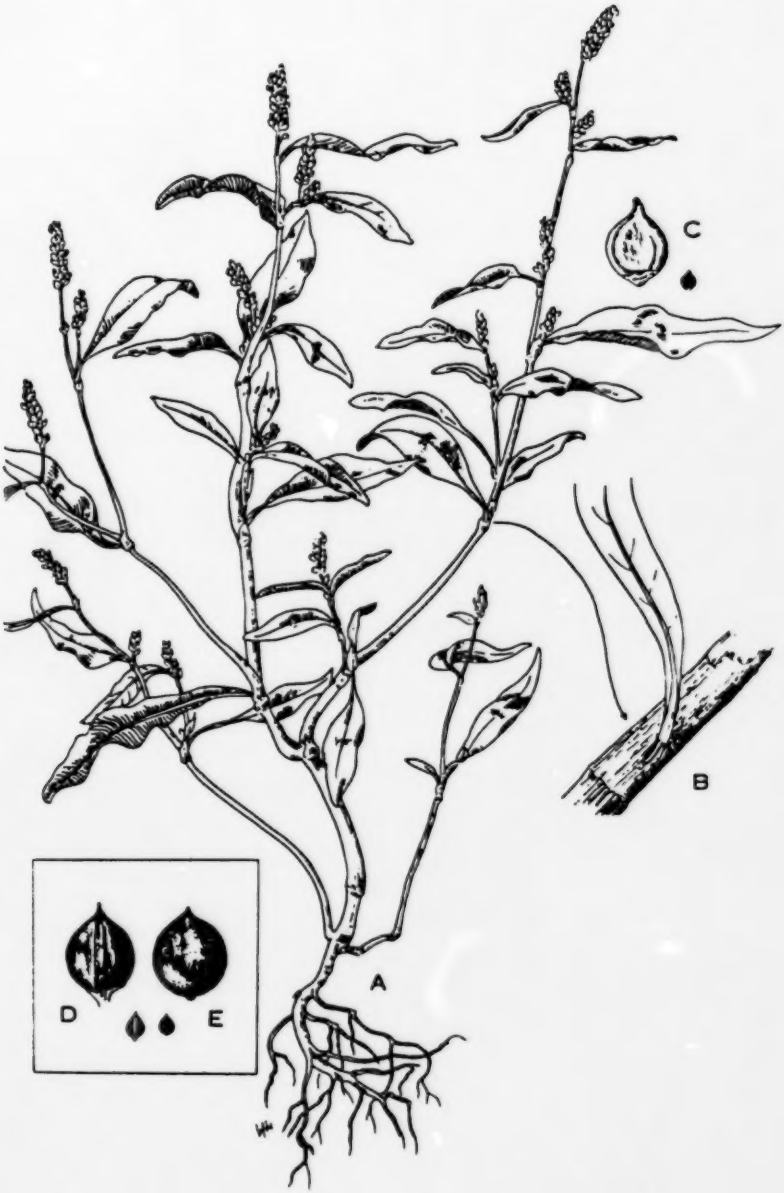
BOTANICAL NAMES Polygonum persicaria (Lady's Thumb); Polygonum scabrum (Green Smartweed), etc.

DESCRIPTION Annuals reproducing by seed. There are several of these Knotweeds which are similar in appearance and different types may be found in different fields or in different areas. The leaves are smooth and rather narrow and they often have a triangular dark spot near the middle. The flowers are whitish-green to pink and are in terminal spikes. The seeds are rather heartshaped and are black and shiny when mature. Each flower produces but one large seed. Like all members of the Buckwheat Family, these plants may be distinguished by the sheath around the stem extending up from each node.

HABITAT Knotweeds are found in grain fields, cultivated land, along roadsides and in waste places. They are often abundant in grain fields and in many cases are more prevalent on damp land.

DISTRIBUTION The various kinds are common throughout the Province.

CONTROL Clean cultivation, hand hoeing, harrowing; and mowing in fields and pastures.



Green Smartweed, Polygonum scabrum: A, plant; B, leaf base and sheath; C, seed. Lady's Thumb, Polygonum persicaria: D, 3-sided seed; E, flattened seed.

LAMB'S QUARTERS

FAMILY Chenopodiaceae (Pigweed or Goosefoot Family).

BOTANICAL NAME Chenopodium album.

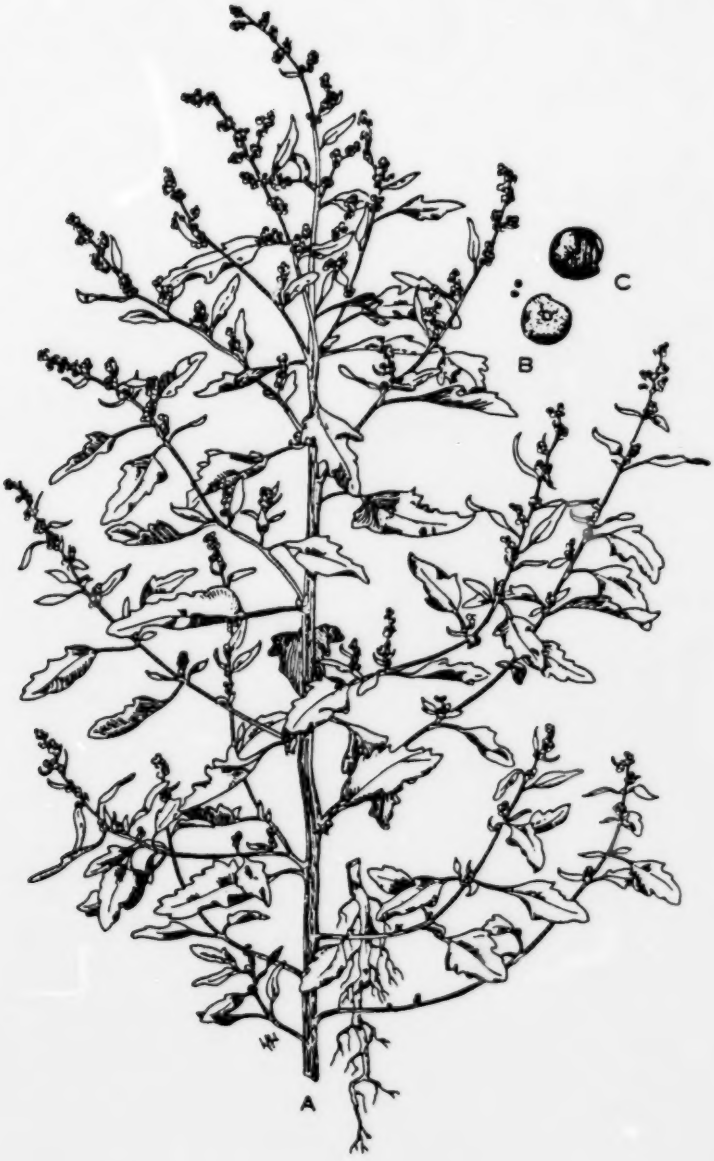
DESCRIPTION Lamb's Quarters is an annual reproducing by seed. The stems are erect, branched and smooth, growing from 8 to 150 cm high. The leaves are ovate to lanceolate with a few broad teeth. They are grayish green and mealy on the lower surface. In fact, this grayish appearance is rather distinctive for the plant. The flowers are very small, in dense clusters and greenish. The seeds are produced in very large numbers and are lens-shaped and dark when mature.

HABITAT Found in gardens, cultivated fields and waste places throughout. It is one of our most common weeds.

Triazine resistant form is frequently found in corn fields.

DISTRIBUTION Very common throughout the Province.

CONTROL Clean cultivation and hand weeding in cultivated crops. Like all other weeds, this is much easier to control if it is attacked in the seedling stage. The harrowing of fields when the weeds are small has been found beneficial.



Lamb's Quarters, Chenopodium album: A, plant; B, seed covered by papery envelope; C, seed.

LOW CUDWEED

FAMILY Compositae (Composite or Aster Family).

BOTANICAL NAME Gnaphalium uliginosum.

DESCRIPTION Low Cudweed is an annual, reproducing by seeds. Stems are low, much branched and spreading on the ground. They are white-woolly, 5 to 30 cm high. Leaves are densely white-woolly except the lowest which are frequently without hairs. Heads are numerous with a dense cluster of several flowers at the terminals surrounded by leaves beneath. Flowers are whitish to light brownish-green to straw colored without ray florets.

HABITAT Poorly drained meadows, pastures, cultivated fields and gardens; especially in grain fields in wet years.

DISTRIBUTION Common throughout the Province.

CONTROL Improved drainage so that water does not stand in low areas; ploughing followed by clean cultivation; hand weeding or hoeing in gardens.

Low Cudweed, Gnaphalium uliginosum.

OX-EYE DAISY

FAMILY Compositae (Composite or Aster Family).

BOTANICAL NAME Chrysanthemum leucanthemum.

DESCRIPTION This weed is a perennial reproducing by seeds and short rootstocks. The stems are erect, smooth and in clumps. The leaves on the stems are simple and narrowly oblong while the basal leaves are deeply lobed and grow in rosettes. The flowers are solitary and are white with yellowish centers. This plant blooms from June through July. It is perhaps the most characteristic weed of old fields.

HABITAT Found in meadows, pastures, strawberry fields and run-out fields; a scattered weed in cultivated fields, lawns and waste places.

DISTRIBUTION Common throughout the Province.

CONTROL Mow infested fields before the plants become woody and go to seed. A short rotation is very useful in controlling this weed.

Ox-eye Daisy, Chrysanthemum leucanthemum: A, plant; B, seed.

PANICUM GRASSES

FAMILY Gramineae (Grass Family).

BOTANICAL NAMES Panicum capillare (Witch Grass); Panicum dichotomiflorum (Fall Panicum).

DESCRIPTION Witch Grass is an annual, reproducing by seeds. Stems, there can be several, are erect or spreading, hairy and 5 to 120 cm high. Leaf sheaths and blades are densely hairy. It has a loose, open, fluffy panicle with numerous, very fine branches and tiny spikelets at the ends. Fall Panicum is an annual, reproducing by seeds. Stems, one to many, from a coarse fibrous root system, can be 10 to 180 cm long. They may be erect, spreading or nearly prostrate on the ground, rooting at nodes contacting soil. Leaf sheaths and blades are usually hairless. Sheaths are thin and membranous fitting loosely above each node. It has large terminal panicles, much branched, thin but quite stiff, bearing single spikelets at the ends. Panicles on lower branches are smaller, often remaining partially enclosed by leaf sheath.

HABITAT Cultivated land, corn and grain fields, gardens, roadsides and waste places.

DISTRIBUTION Witch Grass is scattered throughout, being more of a problem on lighter soils. Fall Panicum is scattered and more rare but becoming more weedy in the corn-growing areas of the province.

CONTROL Clean cultivation until late in the season to prevent seed formation. Scattered plants can be pulled or hoed while small. Mow waste places before seeds are formed.

Fall Panicum, Panicum dichotomiflorum: A, plant; B, leaf-base; C, panicle; D, 2 spikelets.

Witch Grass, Panicum capillare: A, plant; B, spikelet; C, front and back views of seed; D, junction of leaf blade and sheath.

PINEAPPLEWEED

FAMILY Compositae (Composite or Aster Family).

BOTANICAL NAME Matricaria matricarioides.

DESCRIPTION Annual, reproducing by seeds. Stems are erect or spreading, much branched, without hairs, from 10 to 40 cm high. Odor of bruised plant suggests pineapple. Leaves are alternate, divided and feathery. Numerous flower heads solitarily on terminals are cone shaped without rays, about 1 cm in diameter and greenish-yellow in color.

HABITAT Grain fields, gardens, farmyards, around buildings in trampled areas, roadsides and waste places. It often grows well where soil is packed and other weed competition is light.

DISTRIBUTION Very common throughout the Province.

CONTROL Badly infested fields should be spring ploughed and planted with intertilled crop. Mow roadsides and waste places before seeds are formed.

Pineapple Weed, Matricaria matricarioides.

PLANTAINS

FAMILY Plantaginaceae (Plantain Family).

BOTANICAL NAMES Plantago major (Broad-leaved Plantain); Plantago lanceolata (Rib-Grass or Narrow-leaved Plantain).

DESCRIPTION Both weeds are perennials, reproducing by seeds and by new shoots from the roots. All the leaves are in basal rosettes and the flowering stalks are produced from July through September. The flowers of both plants are small and inconspicuous and are greenish in color. Seeds are produced in abundance. Both plants are distinctive in appearance and should not be confused with any other plants. In addition to the difference in the shape of the leaves, the flower spike of the Broad-leaved Plantain is much longer and narrower than that of the Narrow-leaved one.

HABITAT Broad-leaved Plantain is primarily a weed of lawns and about farmyards, although it may also be found in pastures, along roads and in waste places. The Narrow-leaved Plantain is particularly common in hay fields, strawberry fields and to a lesser extent in lawns and waste places.

DISTRIBUTION The Broad-leaved Plantain is found on every roadside and about every farm; the Narrow-leaved Plantain is scattered to common in most fields of the Province.

CONTROL Badly infested fields should be plowed and fertilized and preferably sown to hoed crops before reseeding.

Scattered plants found in lawns can be dug out.

Broad-leaved Plantain, Plantago major: A, plant; B, seed.
Narrow-leaved Plantain, Plantago lanceolata: C, plant without roots; D, seed.

PURSLANE

FAMILY Portulacaceae (Purslane or Portulaca Family).

BOTANICAL NAME Portulaca oleracea.

DESCRIPTION An annual reproducing by seed. The stems are prostrate, much branched and forming mats, succulent, smooth and often reddish in color. The flowers are small and yellow and open only a very short time in the mornings. The thick, succulent wedge-shaped leaves are distinctive for this plant. Flowering usually occurs from about the middle of July and the seeds may ripen even after the plants are pulled up.

HABITAT One of our worst garden weeds; beginning to be found also in fields, especially on light soils.

DISTRIBUTION Purslane is becoming common in gardens throughout; widespread in the Annapolis Valley and rapidly spreading in other parts of the Province. This weed should be watched for and prevented from establishing a foothold.

CONTROL Scattered plants should be eradicated immediately. Purslane can be killed in the seedling stage by frequent and continued shallow cultivation and hoeing from the time the first seedlings appear until frost. The plants should be burned or composted so that they will not root again nor mature seeds. Purslane seedlings do not appear until the weather is very warm and continuous cultivation during the summer is therefore essential.

Purslane, Portulaca oleracea: A, plant; B, seeds.

QUACK GRASS OR COUCH GRASS

FAMILY Graminae (Grass Family).

BOTANICAL NAME Agropyron repens (also known as Rye Grass and Kill-all).

DESCRIPTION A perennial weed reproducing by seeds and rootstocks. This coarse grass is easily recognized in flower or fruit since the seeds are borne in a narrow spike with the flat sides of the spikelets next to the axis. The immature grass has extensive coarse rootstocks so that it is not usually confused with a bunch-type growth, such as that of Timothy. The projections or auricles extending around the stem from the base of the leaves can be used to identify individual stems.

HABITAT Couch Grass is undoubtedly the most troublesome weed in Nova Scotia. It is found in cultivated fields, grass lands and waste areas. It is particularly common on fertile soil.

DISTRIBUTION Common throughout the Province.

CONTROL If cultivated land is badly infested with Couch Grass, seed out to meadow or pasture for a year or two and as soon as the hay crop is removed, the second year, plow shallowly turning the sod over in order to expose the rootstocks of the Couch Grass to the drying action of the sun. Springtooth harrow until the fall or until July, at which time one could sow a smother crop of buckwheat. If buckwheat is sown, plow again in the autumn and in either case leave the land rough over the winter.

Quack Grass, Agropyron repens: A, plant; B, spikelet; C, seed from front and side; D, junction between leaf and sheath showing auricles.

RAGWEED

FAMILY Compositae (Composite or Aster Family).

BOTANICAL NAME Ambrosia artemisiifolia.

DESCRIPTION Ragweed is an annual reproducing by seed. The stems are branched and erect, roughly hairy, and grow 30 to 90 cm high. The leaves are usually finely divided and are a light green in color. The stamens are formed in greenish, bell-like structures which appear in long spikes terminating the stems and branches of the plant. A few simple pistillate flowers appear in the upper leaf axils. Ragweed flowers from mid-July through September.

HABITAT Ragweed is found predominantly in lighter soils along roadsides, the upper parts of sandy and gravelly beaches, and in waste places. In some areas it has spread into hoed areas and grain fields.

DISTRIBUTION Ragweed is common throughout much of the Annapolis Valley. It is scattered around the shores of the mainland and spreading along roadsides of Nova Scotia. Elsewhere it is found mainly around poultry establishments where it has been introduced in poultry feed; uncommon and under control in Cape Breton.

CONTROL Mow to prevent flowering, and use a cultivated crop.

Scattered plants should be pulled to prevent infestation, especially since this plant is the main cause of hay fever.

Common Ragweed, Ambrosia artemisiifolia: A, plant; B, head of male flowers; C, seed.

RAGWORT

FAMILY Compositae (Composite or Aster Family).

BOTANICAL NAME Senecio jacobaea (Tansy Ragwort also known as Stinking Willie).

DESCRIPTION This weed is a biennial and where grazed, mowed or injured it can persist as a perennial. It forms rosettes close to the ground the first year and the second year sends up stems 30 to 90 cm high. The plant is fibrous-rooted, the stem rather woolly near the top, and the leaves dark green and deeply and irregularly divided. The flower heads are numerous, in flat-topped clusters, and are bright yellow in color, somwhat like small daisy flowers in structure.

HABITAT Ragwort is found in pastures, hay fields, along roadsides and especially in cut-over or burned-over areas and waste places.

DISTRIBUTION Very common in Pictou County and east to northern Cape Breton. It is spreading in parts of Colchester County and has been introduced into small localized areas in Cumberland, Hants, Halifax, Kings and Yarmouth Counties.

CONTROL The use of hoe crops or cultivations prior to reseeding to hay or pasture controls this weed. Maintaining a close dense sward discourages the re-establishment of this pest. When the plants are scattered, careful pulling and digging will eradicate it. Sheep grazing keeps the incidence of the weed to a low level.

Tansy Ragwort, Senecio jacobaea: A, plant; B, seed of ligulate flower with pappus removed; C, seed of tubular flower.

RED-ROOT PIGWEED

FAMILY Amaranthaceae (Amaranth Family).

BOTANICAL NAMES Amaranthus retroflexus (Red-root Pigweed);

DESCRIPTION This is a coarse annual weed growing from a pinkish or reddish tap root, reproducing by seeds. The stems are stout and erect, usually from 60 to 90 cm in height, although sometimes much smaller. This weed frequently branches and is usually hairy, at least in the upper parts. The flowers are in greenish, thick, terminal crowded spikes; very small with pointed sepals and without any bright color. Seeds are small and black, produced in great abundance.

HABITAT Red-root Pigweed is found in gardens, grain fields, cultivated fields, orchards and waste places. It is an especially bad weed of cultivated soils and, since it is still spreading, every attempt should be made to keep it from gaining a foothold in a field.

DISTRIBUTION Local but becoming common throughout, especially on lighter soils.

CONTROL Scattered plants should be pulled and disposed of to prevent the seed maturing. Infested fields should be harrowed several times in late spring to induce the seeds to germinate and then this should be followed by a clean-cultivated crop, with hand-weeding or hoeing to prevent stray plants from going to seed. Use a crop rotation including alfalfa or clover. The seeds tend to germinate rather late when the soil warms up.

Red-root Pigweed, Amaranthus retroflexus: A, plant; B, seeds.

ST. JOHN'S WORT

FAMILY Hyperiaceae (St. John's Wort Family).

BOTANICAL NAME Hypericum perforatum.

DESCRIPTION This plant is a perennial reproducing by seed and short runners, usually growing in clumps. The stems are erect, slender, 30 to 60 cm high, much branched above with short leafy shoots. Numerous flowers, bright yellow and showy in open, rather flat-topped clusters, occur from the middle of July throughout August. The determination can be easily confirmed since the petals have a row of black dots around the edge, and the smooth shiny leaves show a number of transparent dots when held up to the light.

HABITAT St. John's Wort occurs in old meadows, strawberry fields, orchards, run-out hay fields, pastures, along roadsides and in waste places, as well as along the borders of rivers. It is usually associated with light, gravelly or sandy soils.

DISTRIBUTION Abundant in the Annapolis Valley and scattered, sometimes becoming common locally, in the rest of the Province.

CONTROL Clean cultivation will soon destroy this weed and it never becomes common in cultivated areas.

Pastures and waste lands should be mown several times to prevent seed formation.

St. John's Wort, Hypericum perforatum: A, plant; B, leaf showing transparent dots; C, pod; D, seeds.

SHEEP SORREL

FAMILY Polygonaceae (Buckwheat Family).

BOTANICAL NAME Rumex acetosella.

DESCRIPTION Perennial weed reproducing by numerous seeds and extensive fine, creeping rootstocks. The whole plant often has a reddish color and a sour taste. The stems grow to about 30 cm high. The lower leaves have two basal lobes so that they are arrow-shaped. Because of its extensive, running root system the plant spreads rapidly and often grows in patches.

HABITAT Sheep Sorrel is found in strawberry fields, orchards, run-out fields, roadsides, cultivated land and even in barrens, apparently growing wherever the competition of other plants is reduced or lacking. It is especially common in fields where there is a poor catch of grass. It is often a nuisance in cultivated land because of its ability to spread rapidly from the roots.

CONTROL Control in cultivated crops consists of cultivation and hoeing, being careful to dig out the whole root system. On old fields use a shorter crop rotation and increase the fertility. Apply lime and fertilizer, particularly nitrogen, in order to get a better growth of grass.

Sheep Sorrel is frequently considered an indicator of acid soil. It is interesting to note that this plant also thrives on neutral or slightly alkaline soil, especially if these soils are low in nitrate nitrogen.

Sheep Sorrel, Rumex acetosella: A, plant; B, seed enclosed in sepals and seed with sepals removed.

SHEPHERD'S PURSE

FAMILY Cruciferae (Mustard Family).

BOTANICAL NAME Capsella Bursa-pastoris.

DESCRIPTION Shepherd's Purse is an annual or winter annual reproducing by seed. The basal leaves are toothed or lobed while the stem leaves are arrow-shaped and without stalks. Rosettes of the plant are often formed in the fall. The stems are branched and erect, slender and arise from the thin tap roots. These may grow rapidly during the early part of the season. The plant produces small white flowers at the tip and these rapidly develop into flat triangular seed pods. It is from the shape of the pods that the plant derives its common name.

HABITAT This weed is found in lawns, gardens, cultivated fields, grain fields and waste places. It occasionally becomes a problem in gardens, lawns and cultivated crops.

DISTRIBUTION Common throughout the Province.

CONTROL Clean cultivation begun early and continued late in the summer. Hand hoeing and weeding in gardens in small areas. Badly infested fields should be harrowed several times after the crop is removed.

Shepherd's Purse, Capsella Bursa-pastoris: A, plant; B, pod; C, seed.

ANNUAL SOW THISTLE

FAMILY Compositae (Composite or Aster Family).

BOTANICAL NAME Sonchus oleraceus.

DESCRIPTION Annual, reproducing by seeds. Stems grow from a tap root erect, stout, branched, 30 to 200 cm high with a few glandular hairs in the upper part. Juice of the stalk is milky. Basal leaves are stalked and stem leaves are not. Leaves are deeply lobed with the terminal lobe short, broad and triangular. All margins have small teeth. Bases of leaves clasp stem with two pointed lobes. Light yellow flower heads 1.5 to 2.5 cm in diameter are in terminal clusters. Seeds have a hairy white pappus to aid in wind dispersal.

HABITAT Cultivated fields, gardens, grain fields, orchards, roadsides and waste places.

DISTRIBUTION Scattered to common in cultivated fields and gardens about towns.

CONTROL Clean cultivation followed by hoeing and hand weeding. Harrow grain fields while grain is small to destroy sow thistle seedlings. Mow waste places before seeds are formed.

Annual Sow Thistle, Sonchus oleraceus: A, plant; B, seed.

PERENNIAL SOW THISTLE

FAMILY Compositae (Composite or Aster Family).

BOTANICAL NAME Sonchus arvensis.

DESCRIPTION This weed is a perennial reproducing by seeds and by extensive creeping roots. The stems are erect and grow 60 to 150 cm high. They are smooth and hollow, and the juice of the plant is milky. The leaves are bright green, glossy and have weak prickles around the margin. The flowers are very similar to those of the Common Dandelion and appear in a loose terminal cluster. They appear from July through September and form heads of tufted seeds.

HABITAT Often found along running dykes, by roadsides, in waste places about towns and in some cases in orchards, cultivated fields, hay or grain fields.

DISTRIBUTION Perennial Sow Thistle is becoming a common weed throughout the Province. It has not spread as rapidly as was once feared, but it is often rather common and troublesome on some of the best soils.

CONTROL All Sow Thistles should be mown early enough to prevent seed formation. Bad fields could be summer fallowed throughout the growing season, and one must be persistent with cultivations. Plant early varieties of grain and use a short rotation.

Perennial Sow Thistle, Sonchus arvensis: A, plant; B, seed.

TOADFLAX OR BUTTER-AND-EGGS

FAMILY Scrophulariaceae (Figwort or Snapdragon Family).

BOTANICAL NAME Linaria vulgaris.

DESCRIPTION Low perennial, up to 60 cm high, reproducing by seeds and creeping rootstocks so that it usually grows in patches. Stems are erect, sparingly branched, round and smooth, with narrow, pale green leaves.

The flowers are distinctive: two-lipped like the snapdragon, bright yellow with an orange throat. These are found in dense terminal racemes and each flower has a long spur.

HABITAT Found mostly in gravelly or sandy soils. It is particularly common around towns and along roadsides where it is spreading out into the country, occasional in cultivated land, grain fields, meadows and pastures.

DISTRIBUTION Common throughout the Province. This is one weed that recently has shown a tendency to spread into cultivated land and become a nuisance.

CONTROL Rather difficult to control and it is well to recognize and use control methods before this weed becomes abundant. Plant a hoe crop and cultivate until late in the season to get the rootstocks out of the soil; follow with an annual smother crop before reseeding to hay.

Toadflax, Linaria vulgaris: A, plant; B, flower; C, part of flowering stem with mature pods; D, seed.

WILD BUCKWHEAT

FAMILY Polygonaceae (Buckwheat Family).

BOTANICAL NAME Polygonum convolvulus.

DESCRIPTION Wild Buckwheat is an annual reproducing by seed. Stems are twining or creeping. Roots are fibrous. Leaves are alternate, in one piece, not lobed, heart-shaped or somewhat arrowhead-shaped with spreading basal lobes, taper-pointed. Flowers are in elongated racemes on individual stems. Seed is roughened, dull black, triangular, about 3 mm long.

HABITAT Wild Buckwheat is common in cultivated fields, gardens, grain fields and waste places.

DISTRIBUTION Widespread throughout the Province.

CONTROL Hand hoeing, hand pulling and cultivation, early if possible to prevent seed production.

Wild Buckwheat, Polygonum convolvulus: A, plant; B, seedling; C, part of flowering stem at maturity; D, seed covered by sepals and also partially exposed.

WILD CARROT

FAMILY Umbelliferae (Parsley Family).

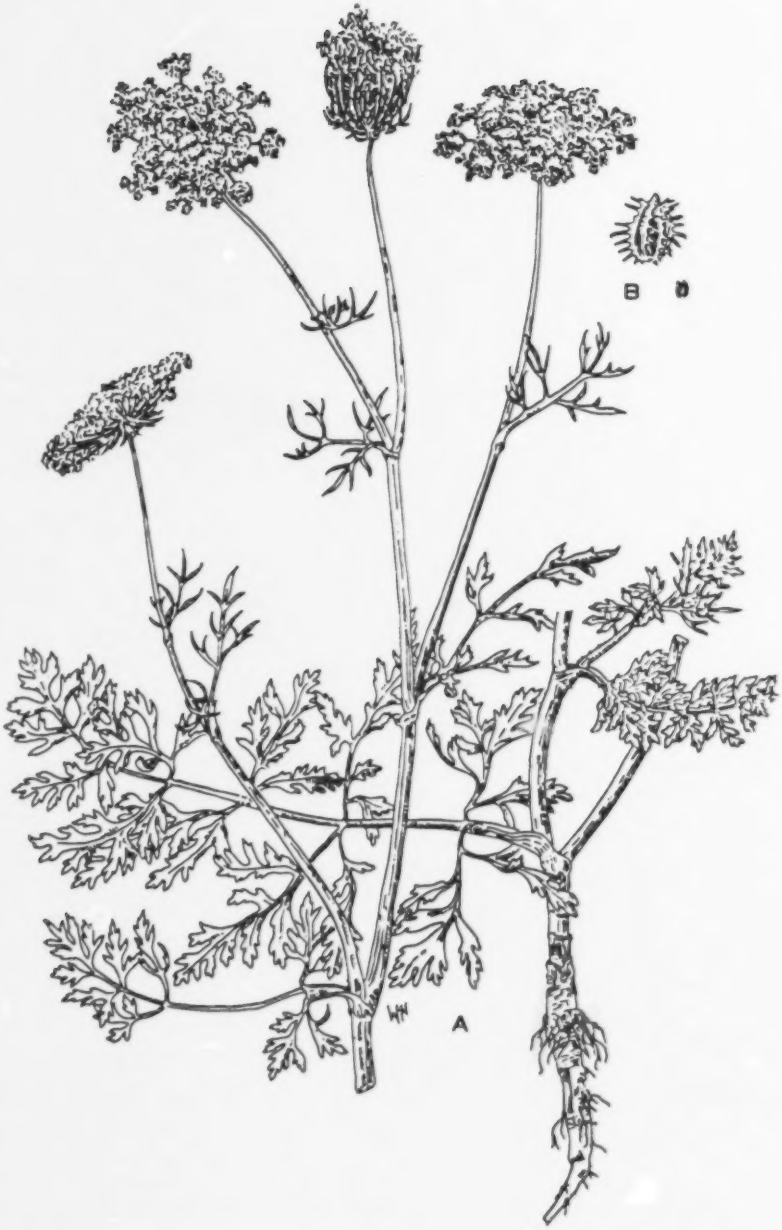
BOTANICAL NAME Daucus carota.

DESCRIPTION Biennial or occasionally an annual. Usually a rosette of leaves the first year is followed by tall stems with flowers and seeds the second summer. The firm, branching stems are from 30 to 90 cm high; root a white, slender tap root; leaves finely divided like those of the cultivated carrot. Flowers are white, small and numerous in a flat, circular cluster called an umbel. This becomes concave as the seeds mature, producing a "bird's nest" as the flower branches turn upward and inward. Flowering occurs from mid-July through September; seeds are very hairy or bristly.

HABITAT Along roadsides and in old fields; most conspicuous in flower after the hay has been cut. It is distinguished from Caraway by much later time of flowering, by hairy leaves and stems, and bristly seeds.

DISTRIBUTION Very common from Windsor to Yarmouth; eastward and northward it is spreading rapidly and here scattered plants or infestations should be eradicated before the plant becomes permanently established.

CONTROL Wild Carrot causes most trouble in meadows and hayfields after the hay has been removed. Such fields should be mowed a second time as soon as the Wild Carrot begins to bloom. Badly infested fields should be plowed and planted to a cultivated crop for at least two years before reseeding. Frequent cultivation will induce seeds in the soil to germinate and will destroy new seedlings.



Wild Carrot, Daucus carota: A, plant; B, seed.

WILD MUSTARD AND WILD RADISH

FAMILY Cruciferae (Mustard Family).

BOTANICAL NAMES Raphanus raphanistrum (Wild Radish); Brassica kaber or Sinapis arvensis (Wild Mustard).

DESCRIPTION Annuals or winter annuals with slender tap roots and growing 60 to 90 cm high. The flowers have four petals in the form of a cross. Those of Wild Mustard are a buttercup yellow; those of Wild Radish are pale and often whitish or purplish. Wild Mustard has the sepals reflexed and the seeds are like turnip seeds in a pod that splits open. Wild Radish has the sepals erect and tight against the corolla; the seeds are large and only one is found in each joint of the pod. It is practically impossible to tell the seedlings apart.

HABITAT These weeds are conspicuous in grain fields and are commonly known as mustard, cadlock or kale. Other kinds are found in waste places and about towns. They are often troublesome in cultivated land and in waste places.

DISTRIBUTION Wild Radish is common and troublesome throughout the Province and particularly in the Annapolis Valley. Wild Mustard is rather common about towns but to date is found only in localized areas in fields.

CONTROL These plants spread from field to field rather slowly. The flowers are conspicuous and scattered plants should be hand-pulled from fields and roadsides as soon as they are noticed. Sow clean seed. In infested fields use clean cultivation followed by hand weeding cultivated crops Practice after-harvest cultivation where possible. Frequent discing or harrowing will induce germination.

Wild Mustard, Sinapis arvensis: A, plant; B, pod; C, seed.

Wild Radish, Raphanus raphanistrum: A, plant; B, pod; C, seed.

WORMSEED MUSTARD

FAMILY Cruciferae (Mustard Family).

BOTANICAL NAME Erysimum cheiranthoides.

DESCRIPTION Wormseed Mustard is an annual or winter annual reproducing by seeds. Stems are slender, erect, branching, somewhat rough and covered with soft short hairs. Leaves are alternate, lanceolate with a wavy margin and branched or forked hairs. Flowers are in racemes with pale yellow petals. Seed pods are 1 to 2 cm long, erect on spreading stems containing several seeds.

HABITAT Grain fields, new meadows, cultivated fields and gardens on gravelly or sandy soils; also found about farm buildings and waste places.

DISTRIBUTION Very common throughout the Province.

CONTROL Clean cultivation followed by hand hoeing or weeding. Grain fields should be harrowed several times after crop removal to destroy autumn seedlings.

Wormseed Mustard, Erysimum cheiranthoides: A, plant; B, upper part of stem showing pods; C, pod; D, seeds.

YARROW

FAMILY Compositae (Composite or Aster Family).

BOTANICAL NAME Achillea millefolium.

DESCRIPTION Perennial, reproducing by seeds and by strong, matted running rootstocks. The stems are erect, 30 to 60 cm high, simple or branched towards the top. Leaves are very finely divided into numerous thread-like divisions, somewhat fern-like in appearance. Flowers are dull-white, in flat-topped clusters, each small daisy-like but with only several rays. A pink form is occasionally found. Flowering occurs from mid-June to September.

HABITAT A common weed found in many habitats, scattered but occasionally becoming abundant in old fields and on rich soil, strawberry fields, common and persistent in lawns, especially on drier areas; not common in cultivated fields.

DISTRIBUTION Common throughout the Province.

CONTROL Yarrow cannot withstand cultivation, especially of the type that will drag the matted rootstocks out of the soil. Fields and meadows which are badly infested must be plowed up and cultivation must be intensive enough to drag the rootstocks out on top of the soil where they will dry out. A year of cultivated crop would be preferable before reseeding.

Yarrow is a bad weed in lawns. Any sods used should be carefully checked to be sure this weed is not present. Small areas should be dug out and the bare patches reseeded or resodded.

Yarrow, Achillea millefolium: A, plant; B, lower part of plant with rootstock; C, head of flowers; D, seeds.

YELLOW ROCKET

FAMILY Cruciferae (Mustard Family).

BOTANICAL NAME Barbarea vulgaris.

DESCRIPTION Biennial or perennial, spreading only by seeds. It forms a cluster of glossy, dark green leaves the first year and the next spring it may attain a height of 60 to 90 cm. Stems are solitary or numerous, depending upon the vigor. Leaves are smooth, the lower ones divided into a large terminal lobe and smaller side lobes, decreasing in size towards the top, the upper ones clasping the stem.

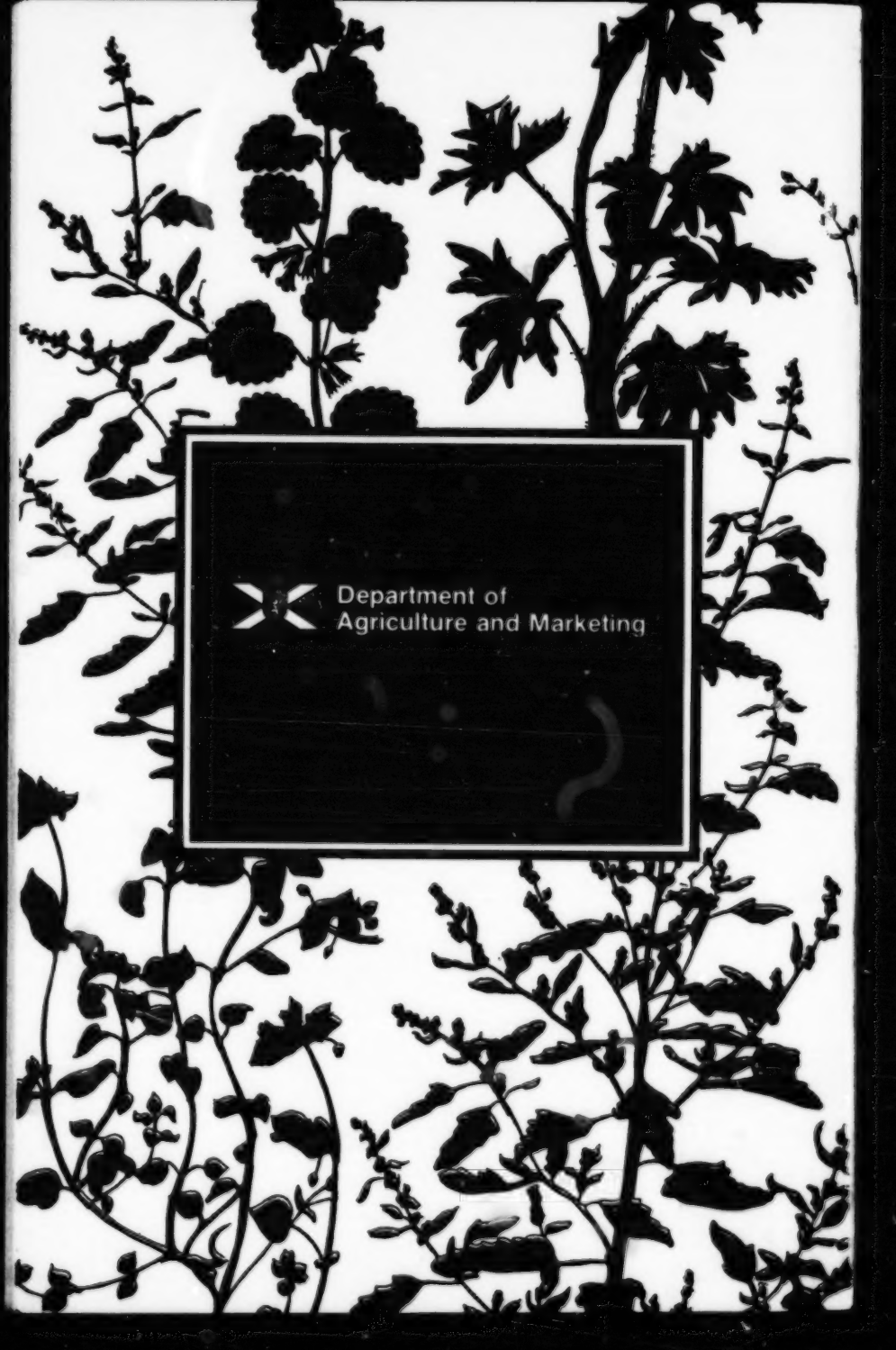
The numerous flowers are bright yellow, forming seed pods which are slender and about 25 mm long. This is the earliest of the mustards to flower, and any yellow clumps seen during late May or early June are almost certainly of this plant. Seeds are small and produced in abundance, scattering usually before the crop is cut.

HABITAT New meadows, hay fields, newly disturbed excavation, cultivated land, particularly on rich alluvial soils or along runs. Yellow Rocket has come in over the years in grain and clover seed and while it is common in the rich soils and intervals and often in orchards in the Annapolis Valley, it appears most generally as scattered individuals in newly-seeded fields throughout the Province spreading along rivers.

DISTRIBUTION Commonly scattered and occasionally abundant throughout the Province.

CONTROL Pull out or hoe scattered plants as soon as flowers are seen. Badly infested fields should be disced or harrowed several times in late summer and early autumn to destroy the rosettes and to induce the seeds to germinate. Plow under the following spring and follow this with a cultivated crop. In meadows, mow the tops as soon as flowers appear, low enough to catch the lowest flowers.

Yellow Rocket, Barbarea vulgaris: A, plant; B, pod; C, seeds.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